

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-020287**Date Inspected:** 05-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr.Zhu Zhong Hai.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

NDT

**TRIAL ASSEMBLY YARD**

This QA Inspector performed randomly Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as OBG Segment 12AE+12BE I Rib hold back.

The weld designations reviewed are as follows.

DP3001-001-021, 021

DP3012-001-009, 010

EP3001-001-047, 048

EP3002-001-005, 006

SP3001-001-175, 176

SP3005-001-013, 014

SP3001-001-179, 180

SP3005-001-017, 018

NDT Notification No-08052

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## WELDING INSPECTION REPORT

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### OBG TRAL ASSEMBLY

This QA Inspector performed randomly Visual Inspection and Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6027 (UT) report for this date. The member is identified as OBG Segment 12 AW~BW, T Ribs joint. The weld designations reviewed are as follows.

SP3046-001-092

SP3047-001-080, 084

SP3048-001-080, 096

NDT Notification No-08047

This QA Inspector observed the following work in progress:

### OBG TRIAL ASSEMBLY

#### OBG Segment 12AE+12BE Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 050289, Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AE+12BE Edge plate to Side plate joint Cross beam side. Joint identified as SEG3001AA-022. ZPMC QC Identified as Liu Hua Jie with Critical welding repair report CWR-B-CWR2684. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-2G (2F) FCM-Repair-1.

#### OBG Segment 12AW+12BW Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 046709, Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AW+12BW Deck plate to Edge plate joint Cross beam side Hold back area. Joint identified as SEG3004AA-021 and CA3009-002. ZPMC QC Identified as Shi Lei with temporary welding repair report WRR-B-WR18909. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-2G (2F) FCM-Repair-1.

#### OBG Segment 12AW+12BW Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 040656, Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AW+12BW Side plate to Edge plate joint counter weight side hold back area. Joint identified as CA3007-005, and CA3008-001. ZPMC QC Identified as Shi Lei with temporary welding repair report WRR-B-WR18910. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-2G (2F) FCM-Repair-1.

#### OBG Segment 12BE+12CE

This QA Inspector observed ZPMC qualified welding personnel identified as 040458, 040367, 052763, Perform Flux Core Arc Welding (FCAW) on OBG segment 12BE+12CE Deck plate to Deck plate joint. Joint identified as OBE12A-003. ZPMC QC Identified as Wang Li Yang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-223(2)1-T-ESAB-1. For more information see below attached picture number 1.

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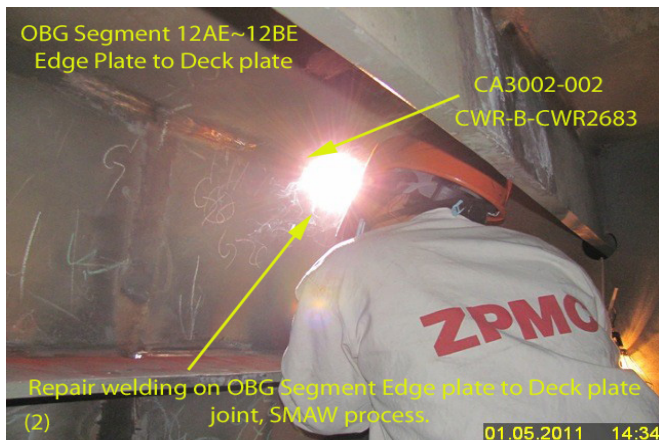
### OBG Segment 12AE+12BE Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 040320, Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AE+12BE Edge plate to Deck plate joint Hold back Cross beam side. Joint identified as CA3002-002. ZPMC QC Identified as Liu Hua Jie with Critical welding repair report CWR-B-CWR2683. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-4G (4F) FCM-Repair-1. For more information see below attached picture number 2.

### OBG Segment 12AW+12BW Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 046709, 046704, Perform Shielded Metal Arc Welding (SMAW) on OBG segment 12AW+12BW Bottom plate to Bottom plate joint repair from inside. Joint identified as OBW12B-001. ZPMC QC Identified as Shi Lei with Critical welding repair report CWR-B-CWR2679. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G (1F) FCM-Repair-1.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone :150-0042-2372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Carreon,Albert

QA Reviewer